

AMENDMENT NO. 1 JULY 2021

TO

**IS 7563 : 1986 CODE OF PRACTICE FOR STRUCTURAL
DESIGN OF CUT AND COVER CONCRETE CONDUITS**

(First Revision)

(Page 7, clause 3.1, Equation 2) — Substitute the following equation with the existing:

$$C_t = \frac{1 - e^{(-2K_a Z)}}{2K_a \tan \phi'}$$

where

$$Z = \frac{H}{B_t} \tan \phi'$$

$$K_a = \tan^2 \left(45 - \frac{\phi}{2} \right)$$

ϕ' = angle of friction between the backfill and the natural soil on the side of trench;

ϕ = angle of internal friction of fill material;

H = difference of final grade and top of conduit in m; and

B_t = width of trench at the crown level of the conduit in m.

(Page 8 Fig. 2) — Substitute the following equation for existing:

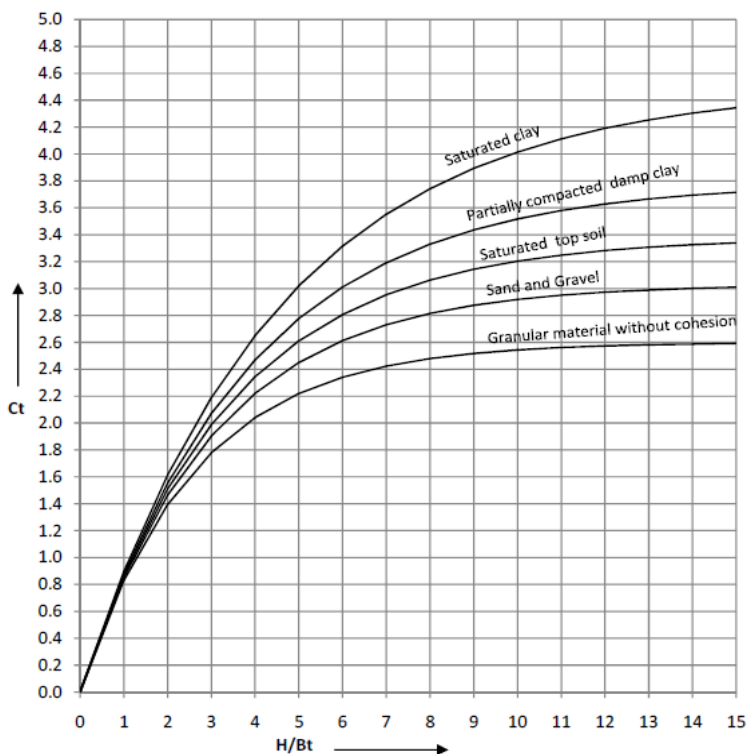


FIG. 2 COEFFICIENT C_t FOR TRENCH CONDITION

Approximate Values of K_a (Ratio of Lateral to Vertical Earth Pressure) and $\tan \phi'$ (Coefficient of Friction against Sides of the Trench) for different types of fill material:

Values for $K_a \tan \phi'$	(Granular material without cohesion)	(Sand And Gravel)	(Saturated top soil)	(Partially Compacted damp Clay)	(Saturated Clay)
K_a	0.33	0.33	0.37	0.33	0.37
$\tan \phi'$	0.6	0.5	0.4	0.4	0.3
$K_a \tan \phi'$	0.1924	0.165	0.150	0.130	0.110